



IEAGHG Information Paper 2016-IP40: Climate Scientists say 1.5°C is inevitable

In a recently published paper called “[The Truth about Climate Change](#)”, a group of climate scientists tell us that: “By 2015, the global temperature had risen by 1°C above pre-industrial levels, that it is certain to rise another half a degree by 2030 and will continue to rise to 2C by 2050 unless drastic action is taken to reduce emissions”

The calculation that the rise to 1.5°C can no longer be avoided is based on the scientific evidence of the time lag between carbon dioxide being emitted by man into the atmosphere and the resultant heating up. The full effects of the greenhouse gases emitted in 2016 will only be felt in 2030.

Also, we should note, this is only the average temperature. Parts of Asia and the Middle East will warm considerably faster than this, and the Arctic has already seen a 4°C increase.

This sobering report can be found at the following link:

<https://drive.google.com/drive/folders/0B7HRGKIJWol-OEZfNDFjRHUwM2c>

The paper and the data behind it has been peer reviewed by Dr Thomas Stocker, professor of climate and environmental physics at Bern University in Switzerland. Dr Stocker was a contributor to the IPCC Assessment Report series between 2008 and 2015.

The scientists inform us that, to have any hope of solving the problem, the world needs to reach net zero emissions by 2060 to 2075. Switching to renewables and planting more forests are important components of how to do this. However, it cannot be achieved by these methods alone, only by deploying carbon capture and storage do they feel can zero emissions be achieved in time.

The paper, however, does finish on an optimistic note. The scientists are reassured that through the Paris Agreement by 2018, all countries are committed to making improvements to their existing pledges to cut carbon, which still gives sufficient time to adopt the necessary policies to take effective action.

Secondly they are reassured that the IPCC had committed itself to improve its communications¹so the public understands quite how serious the situation really is. The scientists feel strongly that:

- *“The public has misunderstood the imminent dangers of climate change, believing that it will happen sometime in the future rather than now”.*
- *“Large numbers of people have been misled into believing that economic growth can only be achieved by burning coal, gas and oil. And despite overwhelming scientific evidence, pressure from sectors benefiting from the use of fossil fuels has halted climate action”.*

Comments:

The key take away from this is that CCs is a critical technology going forward and that global warming will not be limited by deployment of renewables alone. The IPCC communication issue is something that IEAGHG has raised with members previously enforcing the need for better action to communicate the complex topic of climate change to laymen and public alike².

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¹IEAGHG Information Paper, 2016-IP30: IPCC outlines its Plans for new Reports, http://www.ieaghg.org/docs/General_Docs/Publications/Information_Papers/2016-IP30.pdf IEAGHG Information Paper 2014-20: Communicating Climate Science

² IEAGHG Information Paper 2014-20: Communicating Climate Science, http://www.ieaghg.org/docs/General_Docs/Publications/Information_Papers/2014-IP20.pdf